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EXAMINATION OF THE INFLUENCE OF SAME-RACE OCCUPATIONAL ROLE MODELS AND OCCUPATIONAL STEREOTYPES ON ELEMENTARY-AGED BLACK STUDENTS' SCHOOL ENGAGEMENT

A Dissertation

by

KARLEN BROOK MOORE

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

August 2010

Major Subject: Counseling Psychology

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Approved by:

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ABSTRACT

Examination of the Influence of Same-Race Occupational Role Models and Occupational Stereotypes on Elementary-Aged Black Students' School Engagement.

(August 2010)

Karlen Brook Moore, B.S.; M.S., Texas A&M University

Chair of Advisory Committee: Dr. Linda G. Castillo

Oppositional Culture Theory and Social Cognitive Career Theory propositions were explored via employment of social cognitive career theory mechanisms. The effects of observed same-race occupational role models and occupational stereotypes and their indirect effects on school engagement through occupational expectations and future aspirations were explored in elementary-aged Blacks.

Occupational expectations and future aspirations of Black youth were not significantly affected by occupational prestige of jobs held by observed same-race occupational role models. However, it was found that future aspirations of Black youth significantly impacted their school engagement. Future aspirations and school engagement were not significantly affected directly or indirectly by occupational stereotypes. Other noteworthy findings were that educational expectations and future aspirations were negatively correlated with grade. Future studies should be done to further explore relevant contextual factors which can affect school engagement in

elementary-aged Blacks, they should also explore declining educational expectations and aspirations with grade.

DEDICATION

This work is dedicated to my family, spiritual and biological, especially my father and mother (Sherrell and Delores Moore) who planted a desire for education in me at an early age. Also, this paper is written in the memory of my grandfather, O.L. Flowers, who valued education and adamantly sought it for his children and grandchildren.

ACKNOWLEDGEMENTS

I would like to thank my committee chair, Dr. Linda Castillo. She has shown unbelievable patience and support. I also would like to thank my committee members, Dr. Brossart, Dr. May, and Dr. Willson, for their guidance and support throughout the course of this research. I thank Dr. Brossart for his timely statistical reference recommendations. I thank Dr. May for his support and agreeing to be on the committee. Finally, I am very grateful for Dr. Willson's consultation regarding my instrumentation and other statistical procedures.

I would also like to thank my father and mother (Sherrell & Delores Moore). The past nine months have been awesome. To my parents and siblings, you guys have been a source of support, encouragement and hope. You guys sacrificed much financially and have prayed and fasted for me as I wrote. This dissertation is truly a collective accomplishment. My promise to you is that I will get better and that I will not forget that which I first learned.

Finally, thanks to my friends (Angela, Marion, Bill, My Bryan Family, & The Ohio Clique!), Counseling Psychology Faculty Members and staff (Kristie Stramaski and Cathy Watson) for your support through a challenging endeavor. I also want to extend my gratitude to Hilliard Elementary administrators, teachers and students; without their support and assistance I would have no data for my dissertation.

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CHAPTER I

INTRODUCTION

Unique Occupational History of Blacks

Similar to other visible racial/ethnic groups, Blacks developed societies that valued work, business, and trade, but have an interrupted occupational history due to slavery, colonialism and continued oppression (Carter & Cook, 1992). Jaynes and Williams (1989) stated there was a time in our recent history where most Black Americans could not work, live, shop, eat, seek entertainment, or travel where they chose. Perhaps most startling is the assertion that "African-American people since slavery have faced a working life wherein the option of implementing one's self-concept has remained an elusive dream (Blustein, 2006, p.156)". Deng and Zhang (2008) reported Blacks in white –collar occupations increased in 1984 (38.2%) and in 1994 (42.2%) compared to the percent in 1974 (23.3%), but stated this percentage declined in 2002 (27.7%).

The occupational history of Blacks and current trends has significantly impacted current occupational behaviors of Blacks. For instance, Black Americans are significantly more likely to hold jobs in the service sector (Deng & Zhang, 2008). Black Americans also exhibit lower levels of career maturity than do their White counterparts (Cheatham, 1990).

This dissertation follows the style of *Journal of Counseling Psychology.*

Furthermore, the occupational prestige of Black Americans is far lower than Whites (Conley & Yeung, 2005) which creates a skewed representation of observable occupational role models for children (Bowman, 1996).

Portfeli, Hartung, and Vondracek (2008) stated many have underestimated the importance of career information for children and have erroneously assumed they are incapable of comprehending the world of work. While career research has placed limited emphasis on childhood career development (Palladino-Schultheiss & Stead, 2004; Hartung, Porfeli & Vondracek, 2008) leading career theorist (Ginzberg, Ginsburg, Axelrad, & Herma, 1951; Gottfredson, 1981, 1996; Lent, Brown, & Hackett, 1994; Super, 1942, Super et al, 1996) have all acknowledged the relevance of career development throughout the life span. This is perhaps a primary factor in the *The Career Development Quarterly* designating the study of child vocational development as a special issue in 2008.

In the early 1900s, Parson's predicted only 3.2-7.2% of students across the Boston, Philadelphia and Washington, DC area were expected to complete their last year of high school (1909). The educational problems of Parson's time lead him to become concerned about the school to work transition and specifically children's plans and awareness about work. While Parson's writings were published on the eve of a great economic depression, this issue is of major concern in the 21st century.

A primary concern of the present research is that the occupational history of Black Americans has affected the academic achievement of Black children (Bowman, 1995; Cook, Church, Ajanaku, Shadish, Kim, & Cohen, 1996; Kao & Tienda, 19998;

Kenny, Gualdron, Scanlon, Sparks, Blusteing, Jernigan, 2007; Mau & Bikos, 2000, Palladino-Schultheiss, 2005).

Academic Achievement Gap and School Engagement

The educational plight of Black children in America has been a well documented one and is deserving of serious and sustained attention. The academic achievement gap between U.S. Blacks and White Americans has remained constant for the past half-century (Boykin & Ellison, 2009). For the past 30 years, reading, mathematics, and science test score disparities have shown up in successive cohorts of 9, 13, and 17 year old children. Given the rate of change over the past 30 years, achievement gaps could take fifty years in reading and more than a century in math to converge (Hedges & Nowell, 1999). Furthermore, the academic achievement gap does not appear to be a benign statistical fact as many Black students suffer from poor school achievement, high school dropout, overrepresentation in special education classes, low standardized test scores (Irving & Hudley, 2008) and are less engaged in school than White students (Ogbu, 2003).

Miller-Cribbs, Cronen, Davis and Johnson (2002) suggest that the problem of dropout remains a crisis for U.S. society. Past estimates suggest that individual dropouts cost federal and state governing bodies $58, 930 over the course of the individual's lifetime (Imel, 1993). In 1991 there were 3,881,000 dropouts between the ages of 16 and 24. Over the course of their lifetime, this will cost the nation $228.7 billion (Imel, 1993). Mann (1986) suggests the best way to prevent high school dropout is to, "make elementary school more successful (p. 71)." While the research concerning the academic

achievement gap has focused intently on middle and high school populations, differences in academic achievement among Black, White, and Hispanic children appear early in the elementary and secondary school years and persist through their elementary and secondary education (Stevenson, Chen & Uttal, 1990).

Academic achievement gaps have even been documented as early as kindergarten (Barbarin, 2002; Magnuson & Duncan, 2006). Montgomery County of Maryland reported that of 28,000 elementary school students, the percentage of Hispanic and Black children who fell behind their white peers in mathematics increased significantly between the first and sixth grades (Norman, 1988). By sixth grade, the performance of 20% of the White children, 40% of the Hispanic and 50% of the Black children, were reported to be below grade level (Norman, 1988). Garibaldi (1992) reported findings from the Prince George County (MD) and Milwaukee (WI) task force suggested Black males' and females' scores on criterion-referenced tests in mathematics and reading were comparable to that of White students only up to the third grade. However, after the third grade, Black males begin experiencing a sharp decline on criterion-referenced mathematics and reading tests.

The 2000 and 2008 National Assessment of Educational Progress (NAEP) reports also showed significant deficits for fourth grade elementary-aged Blacks in reading, mathematics and science (National Center for Education Statistics, 2000, 2008). Magnuson and Duncan (2006) reported that calculations of 2003 scores, suggested that Black and Hispanic fourth grade student scores were about .92 of a standard deviation below Whites in reading and 1.08 standard deviations lower in math. Hedges and Nowell

(1999) suggests achievement tests are important as they are models of educational and occupational attainment and have significant effects on later economic factors.

For elementary and secondary school students, school engagement has been viewed as critical in determining academic success and social responsibility (Sciarra & Seirup, 2008). McWhirter, McWhirter, McWhirter and McWhirter (1998) suggested students who drop out of school by age 16 have already psychologically disengaged from school as early as grade 3. School engagement is defined as the quality of the relationship between students and their schools (Fredricks, Blumenfeld, & Paris, 2003). Although school engagement has been found to be crucial to student academic success (Fredricks, Blumenfeld, & Paris, 2003; Sciarra & Seirup, 2008) qualitative studies suggest that ethnic minority students particularly African-American students are thought to have fewer positive educational experiences and a lesser degree of school engagement than White students (Fordham & Ogbu, 1986; Ogbu, 2003).

Sirin and Rogers-Sirin (2004) found that Black middle school students who were more engaged in school were more likely to perform well even though they were considered at-risk for school-failure by way of SES and racial background factors. Another study showed that in middle class, Black, adolescents, school engagement was associated with school self-esteem and more time spent on homework (Dotter, McHale, & Crouter, 2007).

In an attempt to clarify why Blacks may have lower school engagement than other racial minorities (e.g., Asians) Ogbu (1978) theorized that Black Children's observation of Blacks' occupational difficulty and lack of social mobility is associated

with their sense of futility in the benefits of school and consequently disengage from the educational process. What follows is an overview of Ogbu's oppositional culture theory as it pertains to school engagement (or disengagement) of Black children.

Oppositional Culture Theory

Scholars suggest that Ogbu's oppositional culture theory provides insight into why Black children disengage from school (Harris, 2008). Ogbu (1978, 1987) conceptualized racial/ethnic minority groups into several categories: autonomous, caste and immigrant minorities. Autonomous minorities are generally small in number, not subordinate to the majority group culture and have a distinct identity. Caste minorities are marginalized and thought of as inferior. Finally, they do not endorse majority group ideologies, yet are still influenced by them. Immigrant minorities are those who moved voluntarily, care less about equality with the majority group, are focused on improving economic situation and remain aware of their country of origin. These descriptions were later consolidated into two categories voluntary and involuntary immigrants (Ogbu, 1993). Voluntary immigrants are those who chose to immigrate to the United States (i.e., individuals of Asian descent), while involuntary immigrants are those whom were historically brought to this country against their will (i.e., individuals of African descent). Ogbu asserts that racial/ethnic minority groups such as Asian Americans and Latinos are able to assimilate into the dominant White American culture because their migration to the U.S. is voluntary. Ogbu (1993) theorized that Black Children's observation of Blacks' occupational and social difficulties lead to a sense or thoughts of futility regarding school. Also, because of the involuntary nature of Black Americans'

migration, many Blacks are unwilling to assimilate to White culture. Ultimately, this results in use of an inversion coping mechanism by involuntary immigrants to deal with the assimilation to dominant-group culture. Cultural inversion is a process by which minorities express their opposition to the dominant group's attitudes, beliefs, preferences, behaviors, and practices. Ogbu (2003) conducted interviews with teachers, students, school staff and community and found that Black students, elementary through high school, were less engaged in school and possessed low occupational expectations.

In addition to unwillingness to assimilate, there is pressure from cultural group members to maintain what is perceived as the group norms (Castillo, Conoley, Brossart, & Quiros, 2007). For instance, a study by Ogbu (1999) found that within the Black community there is a linguistic expectation that Black English should be used as the exclusive means of everyday communication within the Black community. Failure to comply with the linguistic expectations of the community evoked anger and accusations of *acting White* since it was believed that such behavior was evidence of the individual assimilating White attitudes of superiority, trying to deny being Black, and a loss of Black language within the community. Studies also suggest that with Black students will chide other Blacks for engagement in activities that were perceived as acting White (Fordham & Ogbu, 1986; Thompson, Lightfoot, Castillo, & Hurst, 2010). Unfortunately, many of these perceived "acting White" behaviors, such as studying and being engaged in school, are necessary for successful academic achievement.

In support of Ogbu's model, studies have found that having a higher IQ was associated with Black high school student dropouts and a reported sense of futility in

school (Richardson & Gerlach, 1980) and increased paranoia and distrust among Black students transitioning from elementary to middle school (Hirsch &Rapkin, 1987). Furthermore, studies have found that even when Black students endorsed or supported an achievement ideology, they did not themselves work to their full potential (Ford & Harris, 1996). Finally, cultural mistrust and oppositional cultural attitudes was inversely related with outcome expectations and academic achievement in Black high school students (Irvin & Hudley, 2008). These findings are all consistent with school disengagement theorized by Ogbu (1981,1987,1993, 2003).

Same-Race Occupational Role Models

Although Black children may disengage from school in order to "fit in" to Black cultural stereotypic norms, studies also suggest that occupational expectations and aspirations are related to academic achievement and school engagement (Cook et al., 1996; Mau & Heim Bikos, 2000; Kao & Tienda, 1998; Kenny, Gualdron, Scanlon, Sparks, Blustein, & Jernigan, 2007; Ogbu, 1987, 2003, Sirin & Rogers-Sirin, 2004). The occupational history of Blacks has affected exposure of Black children to a racial diversity of occupational role models and has created salient occupational stereotypes. A common thread regarding how Black children's world of work is impacted is related to the historical and current paucity of occupational same-race role models (Bandura, 1986; Bigler et al., 2003, Constantine et al., 1998; Dunn & Veltmann, 1989; Sharf, 1997; Woods & Kaszubowski, 2008). The lack of same-race occupational role models significantly affects the direct and indirect message/learning experience children receive (Bennet, 2006; Lemelle, 2002).

Until recently, there has been little empirical or theoretical work which has examined Black American children's understanding of the world of work and if and how it is affected by racial group assignment (Bigler et al., 2003; Sharf, 1997). Historically, career theorists have always stressed the importance of role models (Ginzberg et al., 1951; Gottfredson, 1981, 1996; Lent et al., 1994; Super, 1942, 1953,1957, 1963, 1980, 1996), Super specifically presented the term key figure in his career development model for children. Key Figure has been defined in a number of ways. Palladino-Schultheiss and Stead (2004) provided the following definition, "role models are interesting or helpful people who have played a meaningful role in individuals' lives (p. 116)". Woods and Kaszubowski (2008) defined key figure as "role models and significant persons who influence an individual's development (p. 434)."

The counseling literature consistently highlights the importance of role models to our career choices (Bowman, 1995). Role models influence career related decisions, in both a positive and negative manner (Bowman, 1995). Dunn and Veltman (1989) reported that members of ethnic minority groups (with the exception of Asian-Americans) are more likely to enter culturally traditional areas where role models already exist. Terrell, Terrell and Miller (1993) suggested that Black high school students selected occupations in which African-Americans have been historically well represented (e.g., military personnel, teacher, postal employee, hair stylist, or cafeteria worker). Consequently, when African-Americans seek same-race role models in various careers, there is a limited amount of resources (Bowman, 1995).

Racial schemata of role models affects children's own occupational interests (Bigler et al., 2003) and while this is generally in the positive direction, the effect on children's career self-efficacy is not known. Black children are exposed to a distribution of occupational roles in which race and occupational status are correlated (Bigler et al.). This is likely to be true within both children's own environmental context and the broader U.S. culture, where High occupational status of Black occupational models are unlikely to be available to many Black children in their own families and communities, especially among children from lower socioeconomic backgrounds (Bigler et al.). The lack of high occupational status role models is disconcerting because scholars note that a child exposed to achievement-oriented behavior (e.g., obtaining advanced degrees, reading frequently, encouraging strong work ethic) and provided achievement-oriented opportunities (e.g., library and museum trips, after-school enrichment programs, educational books and videos) develop the guiding belief that achievement is to be valued, pursued, and anticipated (Davalos & Haensly, 1997). This belief should then in turn promote successful outcomes across development, including high school graduation, the pursuit of higher learning, and the acquisition of high-prestige occupations (Dubow, Boxer, & Huesmann, 2009).

Occupational Stereotypes

Children become oriented to social valuation and have more ideas about who they are relative to social class, behavior and expectations at around age 9-13 (Gottfredson, 1981). Simultaneously, Black children develop racial schemata concerning beliefs about occupations, which affect their occupational aspirations in significant ways

(Bigler et al., 2003). Furthermore, Black children are knowledgeable, and sometimes adopt, racial stereotypes held by European Americans (Bigler et al.). As racial stereotypes are often based on social groups in societal roles, occupational stereotypes often develop. Occupational stereotype is a generalization a person makes about an occupation (e.g. personalities of people, type of lives they lead, appropriateness of the job for different types of people; Gottfredson, 1981, 1996). So, the fact that Blacks are overwhelmingly represented in the service sector (Deng & Zhan, 2008) suggests that occupational stereotypes will exist for Blacks regarding work.

Minimal research has explored race-based occupational stereotypes of children or whether these stereotypes affect children's occupational aspirations (Bigler et al., 2003). Career scholars suggest that societal messages that a child receives could influence their belief that a given career option is not attainable because of environmental barriers (Lent et al. 2000). The child may infer that the obstacles are too great, and that he or she does not possess sufficient ability to cope with them. A study by Bigler et al. (2003) supports career scholars' contention when results of their study found that White and Black children rated novel jobs performed by African-Americans as lower in occupational status than novel jobs performed by European-Americans. Bigler et al. (2003) also found that a career schema from observational/vicarious learning affected Black children's career interests.

Given the important influence of contextual factors, future occupational expectations and aspirations to school engagement of Black children, the present study will utilize the Social Cognitive Career Theory (SCCT) model as a framework to explore

Black children's perceptions concerning same-race occupational role models and how this is related to their occupational expectations, future aspirations, and school engagement. Finally, I examine occupational stereotypes and its impact on future aspirations and school engagement. What follows is an overview of SCCT.

Social Cognitive Career Theory

Social Cognitive Career Theory (SCCT), conceptually, is a framework which explains "central, dynamic processes and mechanisms through which (a) career and academic interests develop (b) career-relevant choices are forged and enacted and (c) performance outcomes are achieved (Lent, Brown, & Hackett, 1994, p. 80)." The SCCT framework focuses on three social cognitive mechanisms central to career development: self-efficacy beliefs, outcome expectations, and goal/aspiration representations.

For this study, I examined outcome expectations and goal-representations. *Outcome expectations* are defined as personal beliefs about likely outcomes. *Goals* are defined as the determination to engage in a particular activity or to affect a particular future outcome (Bandura, 1986). Lent et al. (1994) considers career plans, decisions, aspirations, and expressed choices as goal mechanisms. The determination of which distinction depends upon stated specificity and proximity to choice action. For example, aspirations are career goals far removed from actual career entry. Goals are reflections of self-efficacy, outcome expectations, and interests and are self-regulators of motivation (Lent et al., 1994). Also significant in the model, *learning experiences* are thought to impact future career behavior.

In addition to social cognitive variables (e.g., outcome expectations and goals), SCCT incorporates external contextual factors (Navarro, Flores, Wortington, 2007). The aforementioned sociocognitive core, person and contextual variables are large interlocking components of the SCCT model. Because SCCT is based on Bandrua's (1986) triadic reciprocity model, the aforementioned components are thought to bidirectionally affect one another. So, through repeated activity engagement, modeling and feedback from important others, children and adolescents are thought to refine skills and develop a sense of their abilities in specific tasks, eventually developing domain-specific efficacy and expectations about their performance, ultimately affecting interests, aspirations, goals and actions. Lent et al. (1994) suggest people develop interests in activities in which they feel particularly efficacious and expect positive outcomes. These interests in turn lead to intentions or goals for further activity exposure, which increase the likelihood of subsequent task selection and practice. Activity engagement and practice produces successes and failures resulting in revision of self-efficacy and outcome expectancy estimates.

Finally, the model takes into account values and aptitudes. Aptitude is considered to be heritable, but impacted by nature and nurture. Values are defined as preferences for reinforcers in the academic and work setting. Values are thought to be learned by children and adolescents via social learning processes (e.g., vicarious learning and self-evaluative experiences). In the current research, vicarious learning from same-race professional role models will be evaluated. Lent et al. (1994) suggests interactions with or observation of family members, peers, other significant persons, culture, religion and media interact with vicarious and self-evaluative learning processes. In terms of how values fit in the SCCT model, outcome expectations incorporate the concept of values. So, while interest in a particular academic or career area depends on outcome expectations, the relative value a person places on a task or certain achievement outcome is important to consider. The mechanics of SCCT are illustrated below in figure 1. An explanation of cognitive variables will precede explanation of how person input/individual difference and contextual variables operate in the model.

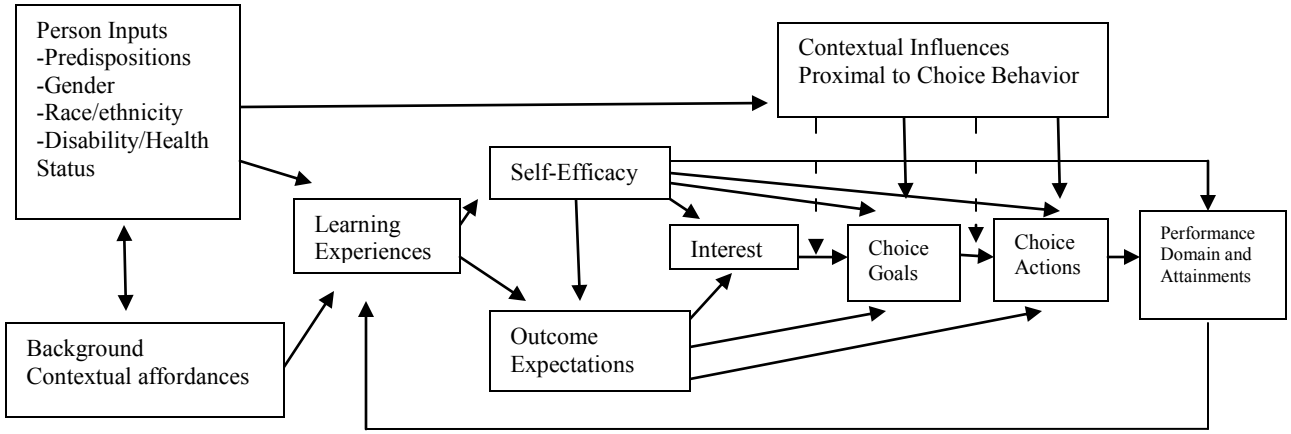

Fig. 1 Social Cognitive Career Theory-Model of person, contextual, and experiential factors affecting career-related choice behavior as presented by. Lent, Brown and Hackett (1994). Dotted lines indicate moderating relationship.

First, self-efficacy and outcome beliefs promote interests. These interests then promote cognitive career choice goals (aspirations) which then increase the likelihood of choice actions (like choosing an academic major or engaging in school) which will then lead to performance domains and achievement experiences which in a cyclical manner can support of weaken efficacy and outcome expectations, and ultimately choice persistence. The model also suggests that while outcome expectations indirectly affect choice behavior via interests, outcome expectations can also directly impact choice goals and actions. In terms of values, the more valued the perceived outcome, the more likely that people will adopt particular career goals and action courses. Lent et al. (1994) broadly define performance attainment in their SCCT model as level of accomplishment (e.g., course grades, behavioral persistence, stability of academic major, etc.).

Personal inputs/individual difference (race and gender), background contextual factors (distal and proximal), and learning experiences interact with the model as follows. There is a reciprocal relationship between background contextual factors and person inputs, which both affect learning experiences. Learning experiences in turn affect self-efficacy and outcome expectations. It is important to note that person inputs/individual differences also directly affect proximal contextual barrier. Points of clarification, contextual variables, just as goals, are distinguished via their temporal occurrence. Distal contextual influences precede and help shape interest and self-cognitions (e.g., differential opportunities for task and role model exposure; emotional and financial support, and cultural and gender role socialization). Proximal contextual variables come into play close to choice actions. The contextual piece asserts that while

people have personal will and volition, certain environmental variables restrict or significantly hinder the choice process. So consequently as noted by the above dotted lines in figure 1, the linear relationship depicted between interests, goals and choice actions can be moderated by proximal contextual factors. The goal to action relationship is of particular interest to the current research. According to the model, those whom perceive less resistance from contextual factors should experience a stronger relationship between interest-goal and goal-action relations and those whom perceive more resistance via contextual factors should experience a weakening relationship. For example, Lent et al. (1994) suggested that outcome expectations via learning experiences may mix with environmental fixtures to enhance or delimit academic and career options.

Recent research on Social Cognitive Career Theory has questioned the location of proximal influences in earlier models and suggested the proximal contextual variable mediates interest to goal and goal to action via self-efficacy (Lent, Brown, Schmidt, Brenner, Lyons, & Treistman, 2003; Lent, Brown, Sheu, Schmidt, Brenner, Gloster, Wilkins, Schmidt, Lyons, & Treistman, 2005). However, the former study was done with a European, college-age, engineering students while the latter studied a sample of Black engineering students. Lent et al. (2005) suggested their population reported few perceived barriers and reported excellent support. One would expect a college student, especially an engineering major, to have successfully negotiated contextual barriers and to have developed substantial self-efficacy beliefs. This aforementioned work is limited in its generalizability, due to level of success experienced and age. However, it should

be noted that SCCT has been researched in middle schools (See Fouad & Smith, 1996; Navarro et al., 2007), but never elementary-aged students.

Purpose of Study

A number of contextual factors (environmental factors) affect the school engagement of Black, elementary-aged children. Per aforementioned theories (Oppositional Culture Theory and Social Cognitive Career Theory) contextual factors such as observed same-race occupational role models and occupational stereotypes can affect occupational expectations and future aspirations, which ultimately can affect school engagement. However, limited application of career-theory based models have been used to explore how contextual factors affect Black elementary-aged children's occupational expectations, future aspirations, and ultimately their school engagement.

A goal of the current research is to explore the social cognitive career theory model in a younger, diverse population. Lent et al. (1994) suggest the study of the specific paths through which race and sex may affect career development has been much less common and that biological differences, race and gender can become, "socially constructed aspects of experience" and shape the career development process through learning experiences. Lent et al. (2003, 2005) also suggested more research is warranted regarding contextual factors. Twelve theoretical propositions and associated subpropositions (explaining relevant contextual factors) were presented by Lent et al. (1994). Propositions 11, 4, 6 and subpropositions 11C, 6C and 6D are of particular interest; an explanation of their use in the present study follows.

Proposition 11 suggests similar to self-efficacy beliefs, outcome expectations are generated through direct and vicarious learning experiences with educational and occupationally relevant activities (Lent et al., 1994). In the present study, occupational expectations are used to represent outcome expectations and observed same-race occupational role models will be used to represent the learning experience variable. Lent et al. (1994) suggests biological differences, race and gender can become, "socially constructed aspects of experience" and shape the career development process through learning experiences. Consequently, subproposition 11C, suggests that gender and racial/ethnic differences in outcome expectations are mediated largely by differential access to direct and vicarious reinforcement experiences. In the present study a path analysis is used to assess the direct effect race has on observed same-race occupational role models. Also, the indirect effect of race on occupational expectations, through the variable observed-same race occupational role models is assessed via employment of Sobel's test, which can test for indirect effects in a recursive path model.

Proposition 4 states outcome expectations affect choice goals and actions both directly and indirectly. As stated, in the present study, outcome expectations are occupational expectations. The choice goal variable in the present study will be future aspirations and the choice action will be school engagement. The direct effects of occupational expectations on future aspirations will be assessed via the path model and the indirect effects of occupational expectations on school engagement will be tested via Sobet's test of indirect effects.

Proposition 6 stated people will try to enter occupations or academic fields consistent with choice goals if they are committed, and have a clear stated goal, close to point of actual entry. This hypothesis will be tested by creating a direct path from future aspirations to school engagement in the path analysis. Because of environmental/contextual factors, subproposition 6C states the relation of choice goals to entry behavior will be moderated by proximal opportunity structure and support systems. In the present research the proximal contextual variable will be will be occupational stereotype. However, recent research (Lent et al., 2003, 2005) suggest proximal influences mediate the relationship via self-efficacy. As self-efficacy is not measured in the present study will assess the indirect effect of proximal influence, occupational stereotype, on school engagement through future aspirations will be assessed. Also, subproposition 6D suggests gender and racial/ethnic differences in career goals, actions and goal-action relations arise largely through differential access to opportunities, supports, and attendant socialization processes. Race will be tested to see if it has an indirect effect, via occupational stereotype, on future aspirations and school engagement.

Subpropositions related to contextual factors are presented below to provide context to tested hypotheses in the present research. Theoretical assertions from Ogbu (1978) will also be presented when relevant to hypotheses.

Person input (race), learning experience (same-race occupational role model), outcome expectations (occupational expectation), choice goal (future aspiration) and choice action (school engagement) will be explored via the SCCT model to assess their relationships to one another and the structural model's ability to account for their

comprehensive effect on the dependent variable, school engagement. Learning experiences (observed same-race occupational role model) and its affect on outcome expectations will be of special interest as well as proximal contextual variables' (occupational stereotype) effect on the future aspirations to school engagement relationship.

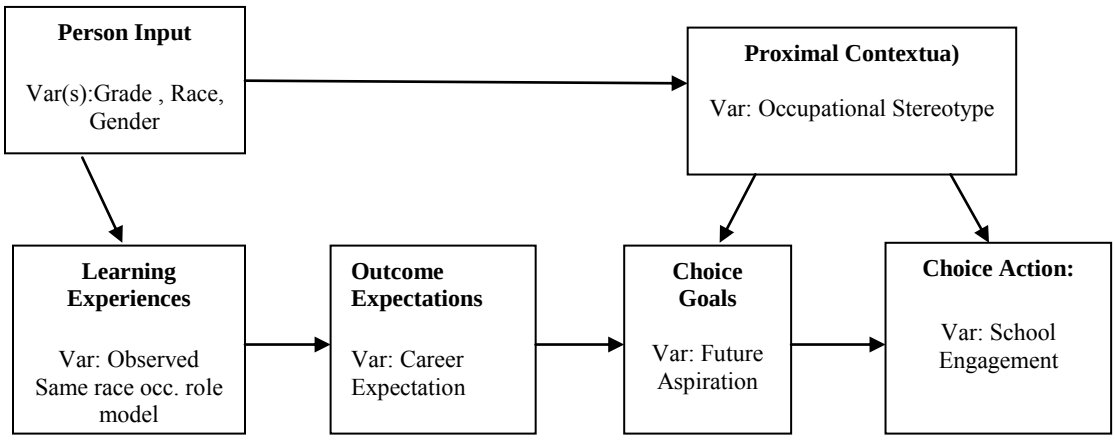

Fig. 2 Adapted Model based upon Social Cognitive Career Theory-Model presented by Lent, Brown and Hackett (1994).

The revised model (See figure 2) is similar to Social Cognitive Career Theory (SCCT) models presented by Lent et al. (1994, 2000) but only consists of outcome expectations, goals, choice actions and contextual factors. Background/distal contextual factors are measured indirectly via person input. Self-efficacy, interests and performance domain attainments (and its relation to Learning Experiences) are not measured or included in this model. Also, the effect of proximal contextual influence on the choice goal (future aspirations) to choice action (School Engagement) relationship will be

evaluated, but not the proximal variables effect on interest to goals. These variables were not measured in the present study and consequently will not be presented in the adapted model for testing. Also, Oppositional Culture Theory, the most dominant theory linking societal conditions to school engagement (Harris, 2008) emphasizes the relationship between expectations and school engagement. Oppositional culture theory suggests children make conscious decisions to not partake in the educational system after noting societal injustices and economic disparities, not that children's self-efficacy or interest is lowered. Sirin & Rogers-Sirin (2004) who studied school engagement in middle school students, also emphasized the relationship between expectations and school engagement.

The model has been adapted to account for a younger population being studied and is now predicting choice action, school engagement, rather than career performance attainment. As stated, the construct occupational stereotype has been studied in children previously by Bigler et al. (2003), though with different instrumentation. Also, Navarro, Flores and Worthington (2007) also applied the model to a younger population and used a unique proximal contextual variable, perceived social support, in Mexican-American middle school students. The following hypotheses are presented for the current research. SCCT propositions and subpropositions are presented along with research hypotheses.

Predictions

Proposition 11C: Gender and racial/ethnic differences in outcome expectations are mediated largely by differential access to direct and vicarious reinforcement experiences (Lent et al., 1994). Black youth reference the surrounding opportunity structure (Ogbu, 1978).

Hypothesis 1: Race will have a significant indirect relationship with occupational expectations through observed same-race occupational role models.

Proposition 4: Outcome expectations affect choice goals and actions both directly and indirectly.

Hypothesis 2: Occupational expectations will have an indirect effect on school engagement through future aspirations.

Proposition 6: People will try to enter occupations or academic fields consistent with choice goals if they are committed, have a clear stated goal, close to point of actual entry.

Hypothesis 3: Future Aspirations will have a direct effect on school engagement.

Proposition 6D: Gender and racial/ethnic differences in career goals, actions and goal to action relations arise through different access to opportunities, supports, and attendant socialization processes.

Hypothesis 4: Race will have a significant indirect relationship on future aspirations and school engagement via occupational stereotype.

Proposition 6C: The relationship between choice goals to entry behavior will be influenced by proximal contextual variables (Lent et al., 1994, 2003, 2005).

Hypothesis 5: Occupational stereotype will have a significant indirect relationship with school engagement through future aspirations.

CHAPTER II

METHODS

Participants

Participants were 120, third-, fourth- and fifth-grade Black and Hispanic students from an urban, southern elementary school. The majority of the teachers and campus administrators were Black. Third grade students composed the overwhelming majority of the sample. Also, the majority of the research participants were Black (80%) and the remainder of the participants were Hispanic (20%). The majority of the school's population was considered to be of lower socioeconomic status and qualified for reduced-lunch. It should also be noted that this was a sample of convenience, satisfying only race and age criteria.

Measures

Future Aspirations. Future aspirations is a self-report, 7-item instrument that assesses the importance and likelihood of school and career achievement (East, 1996). The scale uses a 4-point response format ranging from 1 (not important) to 4 (very important). A sample item from the scale is, "How important for you is it to finish high school?" Items are summed to calculate a future aspiration total score indicating the importance and likelihood of educational and career achievement. Higher scores indicate higher future aspirations. The scale was developed to measure adolescents' attitudes, expectations, and behaviors (East, 1996) and has in past studies yielded a reliability coefficients of .98. These items have been previously used with upper elementary

students (O'Farrell & Morrison, 2003).). Coefficient alpha for this study's sample was .540.

Occupational Aspiration. Occupational aspirations is a free response, self-report scale which assesses choice in future occupation sans restrictions or possible environmental or other contextual restraints (Looft, 1971). It is ascertained by asking the question, "If you were completely free to choose any type of career or job, what do you want to be when you grow up?" Since Looft's introduction of this assessment methodology a number of studies have also used this methodology (See Auger, Blackhurst & Wahl, 2005; Perry et al., 2009; Wahl & Blackhurst, 2000). The provided occupation is quantified by assigning a prestige score from the Nakao and Treas (1994) prestige score listing, ranging from 0-100. Average occupational aspiration scale score for Perry et al. (2009) was 60.64. Average occupational aspiration scale score for the present study was 61.9 (See Appendix B).

Occupational Expectation. Occupational expectations is a free response, self-report scale which assesses what occupation a person really expects to have in life given contextual restraints (Looft, 1971). It is ascertained by asking the question, "Sometimes we are not able to do what we want most, "what do you think you will really be when you grow up?" Since Looft's introduction of this assessment methodology a number of studies have also used this methodology (See Auger, Blackhurst & Wahl, 2005; Perry et al., 2009; Wahl & Blackhurst, 2000). The provided occupation is quantified by assigning a prestige score from the Nakao and Treas (1994) prestige score listing, ranging from 0-100. Average occupational expectation scale score for Perry et al. (2009) was 59.04.

Average occupational expectation scale score for the present study was 62.66 (See Appendix B).

Educational Aspiration. Educational aspiration is a one question scale which assesses the level of education hoped for (Perry, Prztbysz, Muna Al-Sheikh, 2009). It is ascertained by asking, "What is the highest grade you want to finish?" The scale uses a 4-point response format ranging from 1 (I will finish some high school) to 4 (I will graduate from college). Average educational aspiration scale score for Perry et al. (2009) was 6.77 (on a scale of 1-8, elementary school-graduate degree). Average educational aspiration scale score for the present study (See Appendix B) was 3.54 (scale of 1-4, high school-college).

Educational Expectation. Educational expectation is a one question scale which assesses the level of education expected to achieve (Perry, Przybysz, Muna Al-Sheikh, 2009). It is ascertained by asking the question, "What is the highest grade you think you really will finish?" The scale uses a 4-point response format ranging from 1 (I will finish some high school) to 4 (I will graduate from college). Average educational expectation scale score for Perry et al. (2009) was 5.87(on a scale of 1-8, elementary school-graduate degree). Average educational expectation scale score for the present study (See Appendix B) was 3.19 (scale of 1-4, high school-college).

School Engagement. School Engagement is a self-report, 19 item instrument that assesses behavioral, emotional, and cognitive engagement in school (Fredricks, Blumenfeld, Friedel, & Paris, 2003). The scale uses a 4-point response format ranging from 1(not at all true) to 4 (true). A sample item from the scale is "When I am in class, I

just act as if I am working." Items are summed to get a total score, higher scores indicating more school engagement. Coefficient alpha for this study's sample was .871.

*Assessment of Child Race-Occupation Groupings (A*CROG). The ACROG scale, developed for this study, is an 18 picture inventory which assesses children's perceptions of what racial groups are observed doing certain jobs and what racial groups can do certain jobs. Two questions were asked per picture: "Who do you see doing this job?" and "Who can do this job?" The children responded to an answer sheet that has a White and Black face on each item number. The children were allowed to circle one face or both faces for each job presented. A score of 0 was assigned for circling just a White face and a score of 1 was assigned for circling a White and Black face or only a Black face. The log odds of individuals' scores were predicted with occupational prestige scores. Prestige scores were obtained from the Nakao and Treas (1994) prestige score listings. The regression weights for each participant for questions 1 and 2 were used in the analysis as variables observed same-race occupational role model (OSRORM) and occupational stereotype (OS), respectively. Coefficient alpha for this study's sample was .755 for the OSRORM scale and .786 for the occupational stereotype scale.

Procedures

The principal investigator provided multiple copies of a one-page consent/information sheet to the school approved by the Texas A&M University Internal Review Board. The school disseminated the consent/information sheets to parents or legal guardians of all third, fourth and fifth grade students. Forms granting student permission to participate in the study were signed and the yes box was checked. Forms

denying student permission to participate were signed and the no box was checked, or the yes box was checked but the form was unsigned. Parents were also informed that if their child started and did not want to finish they would not be forced to do so. A master list was distributed to all auxiliary teachers. Students were pulled from their various auxiliary classes (gym, art, etc.). Children who wanted to were sent to the gym to complete the surveys. Students were routed to the gym until data collection was completed. A small number of children began the study and did not finish, due to choice, logistical challenges, or misbehavior.

CHAPTER III

RESULTS

ACROG Confirmatory Factor Analysis

The *Assessment of Child-Race Occupation Groupings* instrument developed for this study was assessed via confirmatory factor analysis to see if associated items differentiated between observed same-race occupational role models (OSRORM) and occupational stereotypes. The Assessment of Child Race-Occupation Grouping (ACROG) instrument was assessed as a two factor model via confirmatory factor analysis with Amos 16. Per Brown (2006), goodness of fit was evaluated using the standardized root mean square residual (SRMR), root mean square error of approximation (RMSEA) and its 90% confidence interval (90% CI) and test of close fit (CFit), comparative fit (CFI), and Tucker-Lewis Index (TLI). Hu and Bentler (1999) suggested good model fit was defined by the following criteria: RMSEA ($\leq .06$, 90% CI $\leq .06$, CFit ns), SRMR ($\leq .08$), CFI ($\geq .95$), TLI ($\geq .95$). Multiple indices of fit are used, providing different information (absolute fit, fit adjusting for model parsimony, fit relative to a null model). All indices work together to provide a reliable conservative solution.

Goodness-of-fit indices suggested that the two-factor model did not fit the data well, X^2 (594) = 988.019, p = .000, SRMR = .020, RMSEA = .083, TLI = .409, CFI =.443. Inspection of the standardized residuals and modification indices indicated ill fit of localized points (e.g., largest modification index = 17.142, largest standardized

residual = .711). The majority (729of 36) of freely estimated unstandardized parameters were not statistically significant (ps < .05). Factor loadings estimates revealed that the indicators were not strongly related to their purported latent factors (range of R^2s = .023-.361). The instrument was developed for purposes of the present research and per poor fit-index numbers requires ongoing development and testing with a larger sample size. No occupations were removed from the inventory as a range of occupational prestige numbers was needed for the study.

Logistic Regression Analysis

An assumption of the present research is that occupational prestige (Nakao & Treas, 1994) would quantify Black children's observations of a skewed representation of Blacks in moderate to low occupational prestige settings and also predict children's perceptions of what occupations Blacks can do and what occupation Whites can do. A logistic regression was performed using occupational prestige to predict selection responses (White face- score of 0, White and Black face or Black face-score of 1) to questions 1 (Who do you see working this job?) and 2 (Who can work this job?). The Black or Black and White face versus the White face was chose almost at a ratio of 3:1, for the range of occupational settings displayed (See Table 1).

Table 1 Sample Data for Child Selection of Race-Occupation Groupings

	OSRORM	OS	Total
Black/Black & White (coded as 1)	1493	1479	2972
White (coded as 0)	498	491	989
Total	1991	1970	3961

Occupational prestige proved to be a poor predictor of score 1 (choosing a Black or Black/White face) versus the reference score of 0 (choosing only a White face). Results of the classification table further suggest the model accurately predicted the log odds (75%) of the time, but did so in an undifferentiated manner, always predicting a student response of 1. For representation of log odds algebraically, and log odds classification table, see Appendix B.

A logistic regression was also performed to get the impact of occupational prestige on the children's decision making process and the output was split by ID and each child was assigned a beta weight for questions 1 and 2. The obtained beta weights are presented in Appendix A. Logistic regression weights for question 1 were used to represent the learning variable, observed same-race occupational role model (OSRORM), in the testing of the social cognitive career theory model. Logistic regression weights for question 2 were used to represent the proximal contextual variable, occupational stereotype in the testing of the social cognitive career theory model.

Path Analysis

Before assessing the structural model for goodness-of-fit, means and correlations between measured variables will be reviewed and are presented in Table 2. Correlations between variables used in the structural model are as presented. Race was positively correlated with observed same-race occupational role model (OSRORM) ($r = .245$, $p < .05$). Race was also positively correlated with occupational stereotype ($r = .262$, $p < .05$). OSRORM was not positively correlated with occupational expectation and occupational expectation was not significantly correlated with future aspiration. Future aspiration was positively correlated with school engagement ($r = .299$, $p < .01$). Finally, occupational stereotype was not positively correlated with future aspiration or school engagement.

Other significant correlations where found between occupational aspiration and occupational expectation ($r = .285$, $p < .01$), occupational expectation and educational aspiration ($r = .285$, $p < .01$), educational aspiration and future aspiration ($r = .337$, $p < .01$), occupational stereotype and occupational aspiration ($r = .277$, $p < .01$), sex and school engagement ($r = .262$, $p < .05$), grade and future aspiration ($r = -.262$, $p < .05$) and grade and educational expectations ($r = -.224$, $p < .05$).

Table 2

Means, Standard Deviations, Bivariate Correlations Among the Measured Variables (N = 87)

Variable	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
OSRORM	-										
OS	-.012	-									
SCHENG	-.042	.073	-								
FUASP	-.148	.087	.299**	-							
OCCASP	.042	.277**	-.031	-.045	-						
OCCEXP	.044	-.167	.150	.029	.285**	-					
EDASP	-.015	.135	.319**	.337**	.285**	.102	-				
EDEXP	-.089	-.018	0	.187	-.077	-.088	-.022	-			
RACE	.245*	.262*	.153	.048	.084	-.015	.066	-.196	-		
SEX	-.047	.108	.262*	.158	.140	-.103	-.199	.081	-.010	-	
GRADE	.090	-.015	-.043	-.262*	.112	.166	-.126	-.224*	.031	.061	-
M	-.008	-.010	73.91	26.21	61.90	62.66	3.54	3.197	1.18	1.44	3.51
SD	.035	.033	13.887	2.02	14.36	13.29	.871	1.02	.389	.5	.696

Note. N = 87. OSRORM, observed same-race occupational role model; OS, occupational stereotype; SCHENG, school engagement; FUASP, future aspiration; OCCASP, occupational aspiration; OCCEXP, occupational expectation; EDASP, educational aspiration; EDEXP, educational expectation; M, mean; SD, standard deviation.
RACE (1 = Black, 2 = Hispanic); Sex (1= Boy, 2 = Girl)
* p < .05 ** p <.01. missing value replaced with mean.

Amos (Version 16) statistical package, path analysis procedures were used to test the model predicting school engagement. Maximum likelihood estimation procedures were used to test the measurement and structural model. Kline (2005) recommended that model fit be assessed using a series of indices to ensure more reliable and accurate decisions regarding model fit. In the present study, the chi-square test of significance (X^2), the ratio of chi-square to degrees of freedom (X^2/df), the comparative fit index (CFI), the LISREL goodness-of-fit index (GFI) and Steiger's root –mean-square error of approximation (RMSEA) were used to assess the fit of both the measurement and structural models.

A small, nonsignificant chi-square value is expected if a model provides adequate fit to the data. It is important to note that the chi-square test of significance is sensitive to sample size and is difficult to interpret give its lack of standardization (Kline, 2005). However, the ratio of the chi-square statistic to degrees of freedom reduces its sensitivity to sample size. So, the chi-square statistic to degrees of freedom ratio less than 3.0 indicates a good model fit (Kline, 2005). As values of the CFI and GFI range from 0 to 1, Loehlin (1998) argued that models with CFI and GFI values $\geq$ .90 and $\geq$ .95, respectively, indicate good fit. SRMR and RMSEA values of $\leq$ .10 and $\leq$ .06, respectively, are indicative of good model fit, whereas SRMR and RMSEA values of $\leq$ .08 and $\leq$ .05 indicate excellent or close fit, respectively (Loehin, 1998, Steiger, 1998).

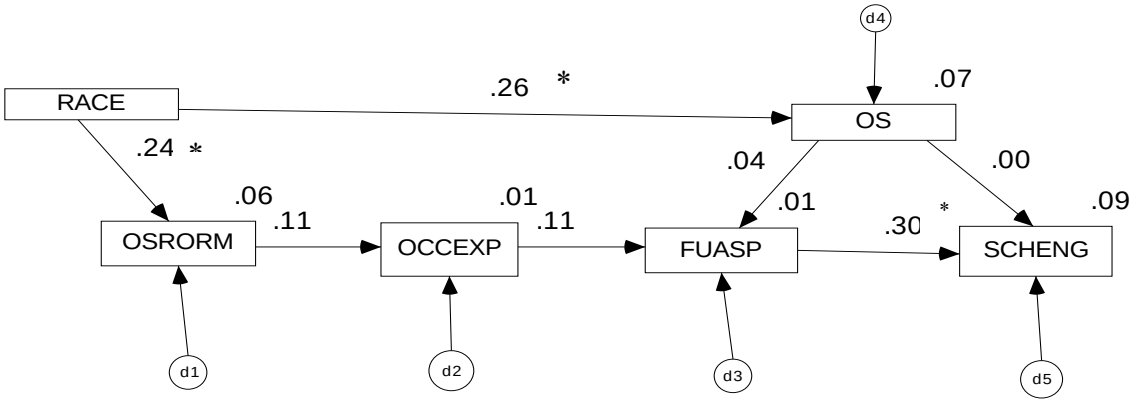

Fig. 3 AMOS derived partial SCCT structural model with standardized regression coefficients on respective paths. * Significant paths

Table 3
Parameter Estimates and Goodness-of-Fit for Structural Model of School Engagement in Figure 3 (N = 87)

Parameter Estimate		**Unstandardized**	**S.E.**	**Standardized**		**P**
Structural Estimates						
OSRORM <-RACE		.023	.010	.245		.019*
OS<-RACE		.022	.009	.262		.012*
OCCEXP<-OSRORM		39.574	36.690	.107		.319
FUASP<-OCCEXP		.017	.016	.111		.300
FUASP<-OS		2.4	6.531	.039		.713
SCHENG<-FUSASP		2.055	.706	.300		.004*
SCHENG<-OS		-1.331	43.072	-.003		.975
Model Fit	**X^2**	**Df**	**X^2/df**	**GFI**	**CFI**	**RMSEA**
Structural	9.525	8 (.300)	1.191	.966	.905	.047

*p < .05. Note. GFI = LISREL's goodness-of-fit index; CFI = comparative fit index; RMSEA = root-mean-square error of approximation; numbers in parentheses are probability level of chi-square for models

Per Social Cognitive Career Theory (SCCT) and Oppositional Culture Theory (OCT) it was hypothesized that direct and indirect relationships would exist among specific key variables. To determine if the data supported the study's hypotheses, over all model-fit and direct and indirect path coefficients were examined and presented in Table 3. Sobel's test was used to examine the indirect effects in the present study's recursive model (see Kline, 2005, p. 162).The structural model indices taken together suggest good fit to the data, with significant paths between race and OSRORM, race and occupational stereotype, and future aspiration and school engagement.

Sobel Mediation Analysis

Hypothesis 1 predicted that race will have a significant indirect relationship with occupational expectations through OSRORM. Inconsistent with this hypothesis, the variable, Race, does not have a significant indirect relationship with occupational expectations (.023 x 39.574 = .910, Z = .603, $p > .05$). Hypothesis 2 predicted occupational expectations will have an indirect effect on school engagement through future aspirations. Inconsistent with this hypothesis, the variable, occupational expectation, does not have a significant indirect relationship with school engagement (.017 x 2.055 = .034, Z = 1, $p > .05$).

Hypothesis 3 predicted future aspirations would have significant direct effect on school engagement. This hypothesis was supported ($\beta = .30$). Hypothesis 4 predicted that Race will have a significant indirect relationship to future aspirations and school engagement through occupational stereotype. Inconsistent with this hypothesis, the variable, Race, does not have a significant indirect relationship with future aspiration

through occupational stereotype (.022 x 2.4 = .0528, Z = .3641, p > .05). Also inconsistent with this hypothesis race does not have a significant indirect relationship with school engagement through occupational stereotype (.022 x -1.331 = -.029, Z = -.0306, p > .05). Finally, Hypothesis 5 predicted occupational stereotype would have an indirect relationship with school engagement through future aspirations. Inconsistent with this hypothesis occupational stereotype did not have an indirect relationship with school engagement through future aspiration (2.4 x 2.055, Z = .364, p > .05).

CHAPTER IV

DISCUSSION

Review of Findings

This study examined the influence of same-race occupational role models and occupational stereotypes and its effects on school engagement through occupational expectations and future aspirations in elementary-aged Blacks. A discussion of findings regarding the logistic regression analysis and the path analysis will be presented.

A major finding regarding the present research is that a logistic regression analysis revealed that occupational prestige poorly accounted for elementary-aged Blacks' race-occupation grouping selections concerning observed same-race occupational role models (Who do you see working this job?) and children's selection of occupational stereotypes (Who can work this job?). Children in most cases selected a White and Black face in response to the aforementioned questions. Findings are partially supported by Bigler et al. (2003) who found Black children invariably selected both Whites and Blacks when asked what racial group should work what jobs. However, Bigler et al. also found that when novel jobs were presented, low and high SES children tended to accord higher status to occupational pictures depicting a White worker than those depicting a Black worker; though the jobs were identical in occupational status. Bigler et al. (2003) suggested race has an independent effect on occupational judgment. To avoid suppressing a potential effect between occupational prestige and race-

occupation groupings, future instrumentation should present illustrations of novel occupational settings with workers of different races.

Hypothesis 1 predicted that race would have a significant indirect relationship with occupational expectations through observed same-race occupational role models in the constructed path analysis. Findings showed that Race does not have a significant indirect relationship with occupational expectations. Thus, this hypothesis was not supported. These findings are inconsistent with Ogbu's theory which stated Black children's occupational expectations are affected by social learning. They are also inconsistent with Cook et al. (1996) who suggested from the second grade on, occupational expectations of Black male children mirrored race and class differences in the labor force. The average occupational expectation prestige score for the present study was 62, even though Conley and Yeung (2005) reported actual occupational prestige of jobs held by Black adults is 26.9. Perry, Przybysz and Al-Sheikh (2009) suggested occupational expectations no longer lag behind aspirations and cited a changing society may have contributed to this occurrence (e.g., the election of a Black president, whose message is centered on hope). This dynamic could potentially still be a factor in low SES Black children (Bigler et al., 2003).

Finally, it is important to note that race was measured as a variable. Scholars have noted the problematic use of racial categories as a proxy for psychological constructs such as racial identity (Helms, Jernigan, & Mascher, 2005). Racial identity, which influences an individual's world view (Sellars, Smith, Shelton, Rowley, & Chavous, 1998), rather than whether an individual is Black or White that may better

explain relationships between occupational expectations and observed same-race occupational role models. Future studies should utilize a psychocultural construct such as racial identity, as race as a variable is conceptually meaningless.

Hypothesis 2 predicted occupational expectations will have an indirect effect on school engagement through future aspirations. Findings showed that occupational expectations didn't have an indirect effect on school engagement through future aspirations. Thus this hypothesis was not supported. These findings are inconsistent with Ogbu's assertions concerning occupational expectations and their effects on school engagement. However, findings are consistent with Harris (2008) who found that Black children are able to simultaneously attribute value to schooling while maintaining beliefs in barriers and that beliefs in barriers had no effect on schooling outcomes. In the present study the presence or absence of same-race occupational role models was not significant to the development of occupational expectations in Black children and did not appear to affect school engagement.

Hypothesis 3 predicted that future aspirations would have a direct effect on school engagement. Future aspirations did have a significant direct effect on school engagement. Thus this hypothesis was supported. This relationship is articulated clearly in social cognitive career theory (Lent et al. 1994, 2000) as the choice goal to choice action relationship. However mediating factors hypothesized to influence this relationship were not found.

Hypothesis 4 predicted Race would have a significant indirect relationship on future aspirations and school engagement through occupational stereotypes. This

hypothesis was not supported. One possible explanation for hypothesis 4 is similar to that provided in hypothesis 1, concerning the problematic use of racial categories as a proxy for psychological constructs such as racial identity (Helms, Jernigan, & Mascher, 2005). Hypothesis 5 predicted that occupational stereotypes will have a significant indirect relationship with school engagement through future aspirations. This hypothesis was also not supported. While research has been presented showing the impact of race-based stereotypes on the academic performance of college-aged Blacks (Spencer, Steele, & Quinn, 1999; Steele & Aronson, 1995) and Black children (McKown & Weinstein, 2003), an important factor concerning hypothesis 4 and 5 is the positioning of the proximal contextual variable, occupational stereotype. Recent research (Lent et al., 2003; 2005) found in college-age populations that proximal influences mediate the goal to action relationship through self-efficacy. Future research should include a measure of self-efficacy and test to see if proximal influences mediate the goal to action relationship through self-efficacy.

Overall the present study adds to the limited literature regarding the link between career development and academic achievement in Black children and supports current literature which suggests future aspirations do affect school engagement in elementary-aged Blacks. Furthermore, findings from the present study suggest educational expectations and future aspirations decrease in Black children as they are promoted in grade level. While not all hypotheses were supported, these exploratory findings provide valuable information to existing research and elementary school counselors.

Limitations of the Research

Some limitations to the current study should be considered. First, grade levels analyzed included the 4th grade, in which kids naturally disengage from school, termed the "4th grade slump." Potential findings surrounding school engagement in this study could be influenced by this naturally occurring national phenomenon. Secondly, the ACROG confirmatory factor analysis revealed poor fit. This may be due to the relatively small sample size as well as the exploratory nature of the research. Secondly, the logistic regression model indicated occupational prestige poorly predicted the log odds of variables, observed same-race occupational role models and occupational stereotyping, by doing so in an undifferentiated manner. Finally, power was limited due to inadequate sample size given the statistical analyses performed. Also, power was limited due to measurement error regarding the ACROG instrument.

The administration of the surveys along with the developmental level of the students may have contributed to this problem. Children were tested on average in groups of twenty in a small area. While children were instructed to not share answers, discussion amongst children may have helped produce homogeneity in answers on instrumentation assessing children's perception of what jobs Blacks have been observed doing and what jobs Blacks can do. Finally, concerning developmental level, children may not have entered the circumscription/realistic period (Gottfredson, 1981, 1996) as a lot of elementary-aged students tend to report high aspirations (Auger, 2005; Perry, Przybysz, & Al-Sheikh, 2009).

Third, only same-race occupational role models and occupational stereotypes were explored as potential barriers and supports. There may be contextual barriers and supports which are more relevant for the occupational expectations, future aspirations and school engagement of Black youth. While the opportunity structure plays a major role in oppositional culture theory, Ogbu (1978, 1987) also presents a cultural aspect by differentiating between voluntary and involuntary immigrants. A number of studies regarding Black youth and academic success have found that successful students have a positive world view regarding the opportunity structure (Ford, 1992; Ford & Harris, 1996; Irving & Hudley, 2008). This may be evidence of children who are able to develop a bicultural identity generally do better in school. Also, one should give consideration to Lent et al. (2003, 2005) when modeling the effect of contextual variables, especially the placement of proximal contextual variables.

Finally, educational aspiration was not used in the current model but analyses indicated it was significantly correlated with future aspirations as well as occupational aspirations. Aspirations may be more age appropriate. In the present study most items were endorsed in the positive direction. Aspirations may be easier for younger children to grasp, and expectations may be slightly more abstract. Auger (2005) found that White, 1st, 3rd, and 5th graders did not differentiate well between aspirations and expectations.

Future Recommendations

Future research in this area should be careful when selecting barriers and supports for possible study and explore a range of barriers and supports. For children, the barriers may have to be measured or assessed in a more concrete manner. Lent et al.

(2001, 2006) called for creation of valid measures. Lent et al. (2006) offered techniques for measurement development regarding the SCCT model. Lent et al. (2005, 2006) also suggested closer scrutiny be provided concerning contextual factors and the area of developing and measuring contextual factors is still new in the social cognitive career theory literature. Concerning the present research, while a common thread in the majority of the aforementioned literature is potential effects related to historical and current paucity of occupational same-race professional role models (see Bandura, 1986; Bigler et al., 2003, Constantine et al., 1998; Dunn & Veltmann, 1989; Merriman & Guerin, 2007; Palladino-Schultheiss & Stead, 2004; Sharf, 1997; Woods & Kaszubowski, 2008), how this manifests as relevant to Black children's school engagement warrants further attention.

The Career Development Quarterly presented a special issue in 2008 on the topic of vocational development in children (Hartung, Porfeli & Vondracek, 2008), towards the goal of gaining a better understanding of children's career development especially as it can inform academic achievement. Also, the American School Counselor Association National Model (ASCA, 2003) promotes a comprehensive school counseling program which evaluates students' abilities to locate and interpret career and personal/social information and how this information is related to achieving personal, social, educational and career goals. The aforementioned recommendations were reiterated by Gysbers and Henderson (2006) in discussing the necessity of comprehensive, developmental school counseling programs which allow counselors to maximize their contact and influence with students by utilizing their time to create programs which can connect students'

learning to future career goals and other efforts which could promote behavioral and cognitive engagement.

The present research addresses and aids professionals regarding both major recommendations. The findings for this study suggest elementary school counselors should focus increased attention on Black children's future aspirations and its affect on their school engagement. Secondly, it highlights a problematic trend regarding educational expectations and future aspirations in elementary-aged children. Finally, it used a valid theoretical framework, SCCT, in exploring the aforementioned. In summary, given the importance of career information to children's academic achievement, research must work to integrate relevant career and school engagement discussion. Utilization of social cognitive career theory to explore Black children's academic achievement shows promise but requires further research.

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APPENDIX A

SQUARED MULTIPLE CORRELATIONS FOR ASSESSMENT OF CHILD RACE PROFESSION GROUPINGS

	Estimate
OS	.000
OSRORM	.000
CARPG3BB_1	.128
CARPG2BB_1	.028
CARPG1BB_1	.050
CARPG7BB_1	.168
CARPG9BB_1	.067
CARPG18BB_1	.131
CARPG17BB_1	.189
CARPG14AB_1	.191
CARPG16AB_1	.278
CARPG10AB_1	.020
CARPG6BB_1	.118
CARPG4BB_1	.162
CARPG5BB_1	.156
CARPG10BB_1	.223
CARPG11BB_1	.125
CARPG12BB_1	.205
CARPG13BB_1	.276
CARPG15BB_1	.173
CARPG14BB_1	.209
CARPG16BB_1	.242
CARPG8BB_1	.302
CARPG18AB_1	.068
CARPG17AB_1	.220
CARPG15AB_1	.146
CARPG13AB_1	.235
CARPG12AB_1	.311
CARPG11AB_1	.095
CARPG9AB_1	.339
CARPG8AB_1	.098
CARPG7AB_1	.237
CARPG6AB_1	.102
CARPG5AB_1	.040

	Estimate
CARPG4AB_1	.118
CARPG3AB_1	.080
CARPG2AB_1	.096
CARPG1AB_1	.096

APPENDIX B

DESCRIPTIVE STATISTICS

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
SMEAN(SCHENG)	87	32.00	95.00	73.9136	13.88759	-.466	.258	-.278	.511
SMEAN(FUASP)	87	18.00	28.00	26.2143	2.02353	-1.533	.258	2.557	.511
SMEAN(OCCASP)	87	21.00	86.00	61.9080	14.36475	-.672	.258	1.245	.511
SMEAN(OCCEXP)	87	25.00	86.00	62.6667	13.29481	-.533	.258	1.318	.511
SMEAN(EDASP)	87	1.00	4.00	3.5465	.87147	-1.872	.258	2.381	.511
SMEAN(EDEXP)	87	1.00	4.00	3.1977	1.02094	-.814	.258	-.796	.511
Valid N (listwise)	87								

APPENDIX C

LOGITREG1		LOGITREG2	
1	-0.009	1	-0.01
3	-0.04	3	-0.022
4	0.04	4	-0.075
5	-0.009	5	-0.053
9	0.011	9	0.013
12	-0.026	12	0.019
13	-0.012	13	-0.088
16	-0.078	16	0.01
17	0.063	17	-0.042
18	0.031	18	-0.009
19	-0.004	19	0.051
22	-0.084	22	-0.023
23	0.067	23	0.014
24	-0.004	24	0.048
25	-0.014	25	0.079
28	0.013	28	-0.015
29	0.019	29	0.01
30	-0.007	30	-0.062
31	-0.058	31	-0.047
33	-0.009	33	0.007
34	-0.014	34	0.029
35	-0.026	35	0.008
37	-0.005	37	0.019
38	-0.015	38	-0.025
40	-0.084	40	-0.027
41	-0.039	41	-0.03
42	0.008	42	-0.037
43	0.022	43	-0.036
44	-0.017	44	-0.026
45	-0.022	45	-0.03
47	0.009	47	-0.004
48	-0.023	48	0.002
49	0.046	49	0.012
53	-0.033	53	-0.039
54	0.011	54	-0.013
56	-0.068	56	-0.01
57	-0.063	57	-0.021

59	0.015	59	0.015
60	-0.033	60	-0.033
61	0.032	61	0.02
62	0.01	62	-0.027
63	-0.006	63	-0.022
64	0.023	64	-0.037
65	-0.018	65	0.019
66	-0.025	66	-0.025
67	-0.034	67	-0.045
68	-0.021	68	-0.019
70	-0.005	70	0.006
71	-0.033	71	0.015
72	-0.084	72	0.025
73	-0.017	73	-0.044
74	-0.017	74	-0.004
78	0.011	78	-0.022
80	0	80	-0.001
82	-0.037	82	0.004
83	-0.002	83	-0.002
84	-0.007	84	0.014
85	0.008	85	-0.051
87	-0.031	87	-0.004
88	-0.015	88	-0.027
89	0.064	89	0.04
90	-0.031	90	0.06
92	0.081	92	-0.029
93	0.014	93	-0.043
94	0.019	94	-0.095
96	-0.022	96	-0.019
97	-0.007	97	-0.002
100	0.047	100	-0.002
101	-0.002	101	-0.002
103	-0.031	103	-0.04
105	-0.039	105	-0.012
106	-0.015	106	-0.01
107	-0.019	107	0.047
109	-0.008	109	-0.041

APPENDIX D

Equation 1.2. Predicted Logit of (Blk/Blk & White observed) = 1.6 + (-.009)*Prestige

Equation 1.3. Predicted Logit of (Blk/Blk&White can work) = 1.450 + (-.007)*Prestige

Classification Table of Question 1

Observed	Predicted Question 1		Percentage Correct
	0	1	
0	0	498	0
1	0	1493	100
Overall Percentage			75.0

a. Constant included in the model
b. The cut value is .500

Classification Table of Question 2

Observed	Predicted Question 2		Percentage Correct
	0	1	
0	0	491	0
1	0	1479	100
Overall Percentage			75.1

a. Constant included in the model
b. The cut value is .500

APPENDIX E

FUTURE ASPIRATION SCALE

Name:_____Code:_____

1. How important is it to you to finish high school?
a. not important
b. kind of important
c. important
d. very important

2. How important is it to you to go to college?
a. not important
b. kind of important
c. important
d. very important

3. How important is it to you to be successful in a job or career?
a. not important
b. kind of important
c. important
d. very important

4. How important is it to your mother that you go to college?
a. not important
b. kind of important
c. important
d. very important

5. How important is it to your father that you go to college?
a. not important
b. kind of important
c. important
d. very important

6. Do you think you will finish high school?
a. very unlikely
b. unlikely
c. likely
d. very likely

7. Do you think you will be successful in a job or career?

a. very unlikely
b. unlikely
c. likely
d. very likely

APPENDIX F

OCCUPATIONAL & EDUCATION –ASPIRATIONS, EXPECTATIONS

Name:_____Code:_____

1. If you were completely free to choose any type of career or job, what do you want to be when you grow up?
Answer:_____

2. Sometimes we are not able to do what we want most, what do you think you will really be when you grow up?
Answer:_____

3. What is the highest grade you want to finish?
a. I will finish some high school
b. I will graduate from high school
c. I will finish some college
d. I will graduate from college

4. What is the highest grade you think you really will finish?
a. I will finish some high school
b. I will graduate from high school
c. I will finish some college
d. I will graduate from college

APPENDIX G

SCHOOL ENGAGEMENT

Name:_____Code:_____

1. I pay attention in class.
a. not at all true
b. kind of true
c. don't know
d. true
e. very true

2. When I am in class, I just act as if I am working.
a. not at all true
b. kind of true
c. don't know
d. true
e. very true

3. I complete my homework on time.
a. not at all true
b. kind of true
c. don't know
d. true
e. very true

4. I follow the rules at school.
a. not at all true
b. kind of true
c. don't know
d. true
e. very true

5. I get in trouble at school.
a. not at all true
b. kind of true
c. don't know
d. true
e. very true

1. I feel happy in school.
a. not at all true
b. kind of true

c. don't know
d. true
e. very true

2. I feel bored in school
a. not at all true
b. kind of true
c. don't know
d. true
e. very true

3. I feel excited by the work in school.
a. not at all true
b. kind of true
c. don't know
d. true
e. very true

4. I like being at school.
a. not at all true
b. kind of true
c. don't know
d. true
e. very true

5. I am interested in the work at school.
a. not at all true
b. kind of true
c. don't know
d. true
e. very true

6. My classroom is a fun place to be.
a. not at all true
b. kind of true
c. don't know
d. true
e. very true

1. When I read a book, I ask myself questions to make sure I understand what it is about.
a. not at all true

b. kind of true
c. don't know
d. true
e. very true

2. I study at home even when I don't have a test.
a. not at all true
b. kind of true
c. don't know
d. true
e. very true

3. I try to watch TV shows about things we are doing in school.
a. not at all true
b. kind of true
c. don't know
d. true
e. very true

4. I talk with people outside of school about what I am learning in class.
a. not at all true
b. kind of true
c. don't know
d. true
e. very true

5. I check my schoolwork for mistakes.
a. not at all true
b. kind of true
c. don't know
d. true
e. very true

6. If I don't know what a word means when I am reading, I do something to figure it out, like look it up in the dictionary or ask someone.
a. not at all true
b. kind of true
c. don't know
d. true
e. very true

7. I read extra books to learn more about things we do in school.
a. not at all true
b. kind of true

c. don’t know
d. true
e. very true

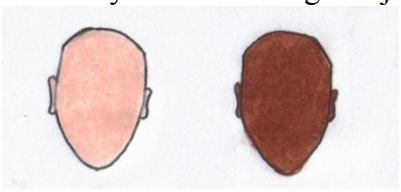
8. If I don’t understand what I read, I go back and read it over again.
a. not at all true
b. kind of true
c. don’t know
d. true
e. very true

APPENDIX H

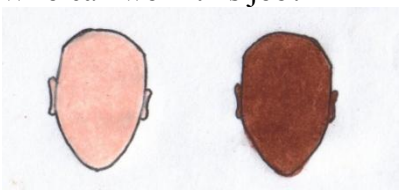
ASSESSMENT OF CHILD RACE-OCCUPATION GROUPINGS ANSWER SHEET

Name: _____ Code: _____

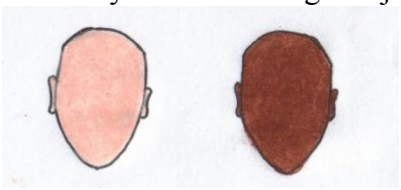
Picture 1
Who do you see working this job?



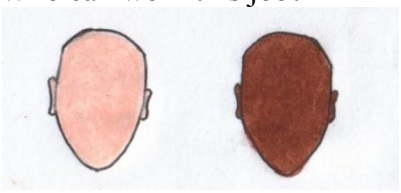
Who can work this job?



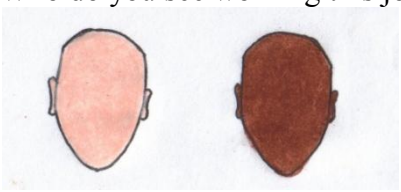
Picture 2
Who do you see working this job?



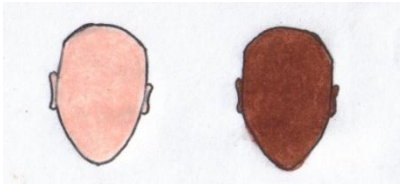
Who can work this job?



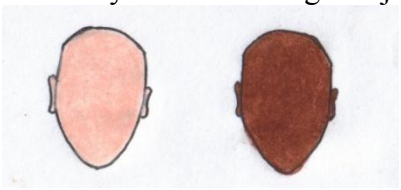
Picture 3
Who do you see working this job?



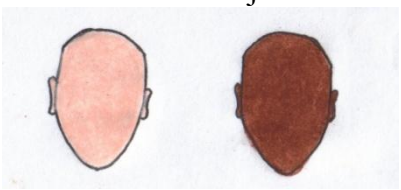
Who can work this job?



Picture 4
Who do you see working this job?



Who can work this job?



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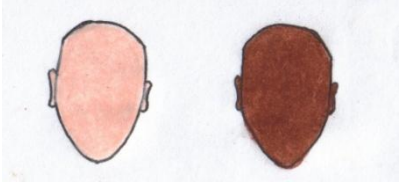

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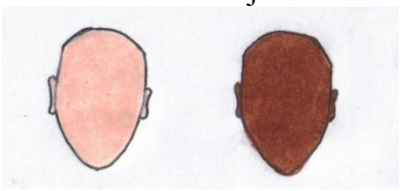

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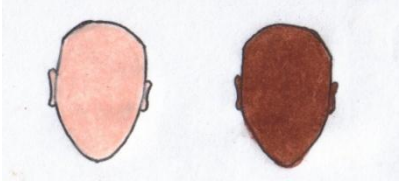

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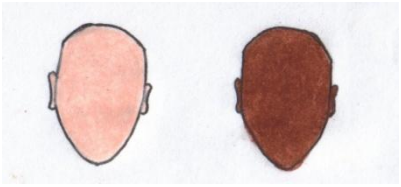

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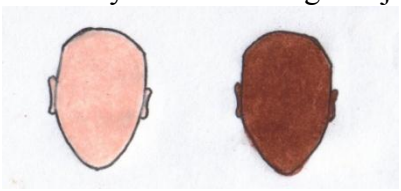

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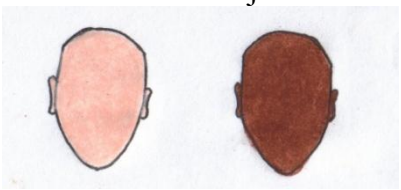

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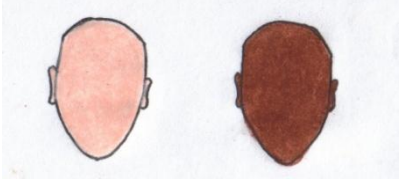

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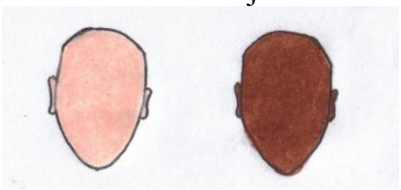

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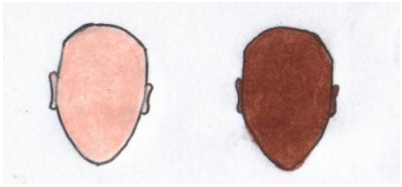

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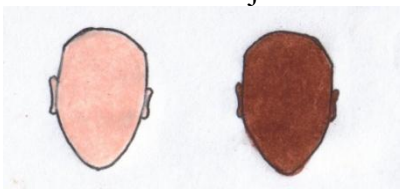

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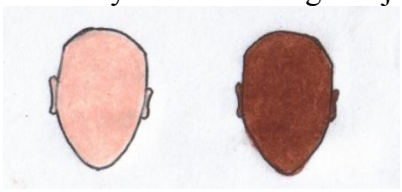

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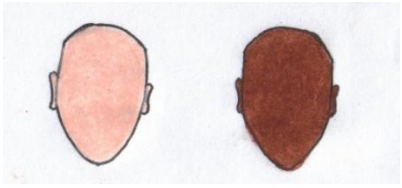

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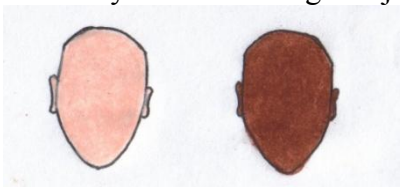

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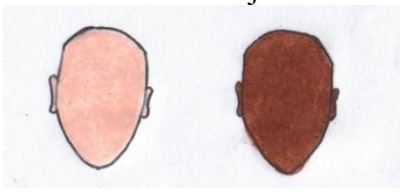

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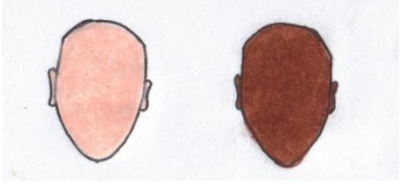

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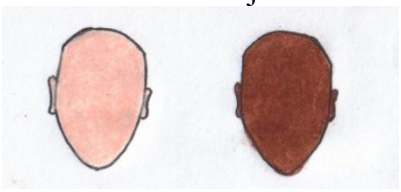

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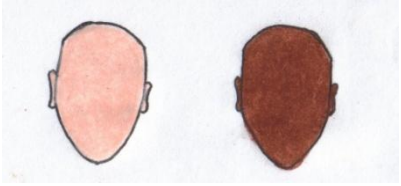

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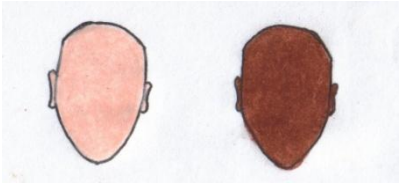

Picture 14

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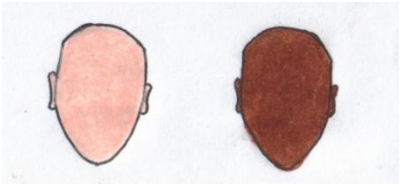

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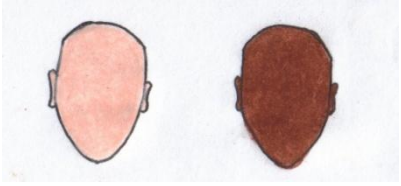

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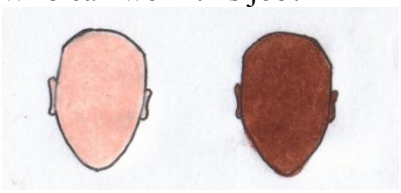

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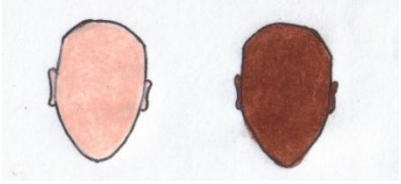

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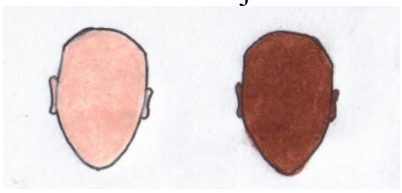

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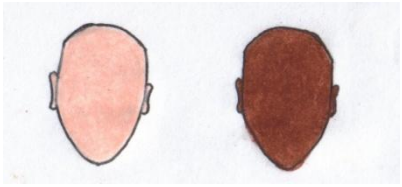

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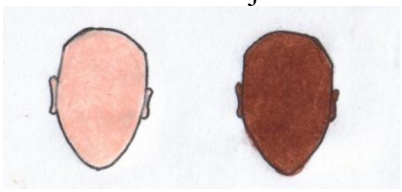

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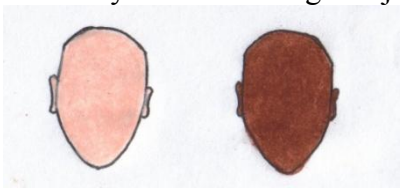

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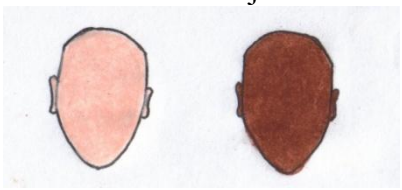

APPENDIX I

OCCUPATIONAL PICTURES & OCCUPATIONAL PRESTIGE SCORES

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